

### **ABSTRACT OF THE DISCLOSURE**

A method is disclosed for improving printer characterization tables to best reproduce desired colors on a destination device given the ambient illumination at that device's location. The user determines viewing illumination using a target preferably provided with the printer or alternatively printed directly from the 5 characterized printer. The target comprises metamer color pairs which allows users to quickly determine their approximate viewing illumination by selecting the matching pair. A metamer match of color pairs (metamers) is defined to have equal colorimetric values, XYZ or LAB, for one illumination and differing reflectance spectra. Each color pair corresponds to a different illumination 10 condition. All pairs of metamers which comprise the target are examined to determine which pair is the best match. Targets could be bipartite patches, half-and-half images, readability tasks, or images. The appropriate color-correction transform for the selected illumination is applied. Alternatively the color-correction transform for the selected illumination is modified directly.